

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## FILE COPY 408

To: TIMOTHY A. CZAJA  
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**WRITTEN OPINION**

(PCT Rule 66)

Form PCT/IPEA/408 (cover sheet) (July 1998) DO NOT MAIL

<p>To: TIMOTHY A. CZAJA DICKE, BILLIG &amp; CZAJA, P.A. 701 FOURTH AVENUE SOUTH SUITE 1250 MINNEAPOLIS, MINESOTA 55415</p>		<p>Date of Mailing (day/month/year)</p>
<p>Applicant's or agent's file reference  A126.106.111</p>		<p><b>REPLY DUE</b> within <b>TWO</b> months from the above date of mailing</p>
<p>International application No.  PCT/US02/22546</p>	<p>International filing date (day/month/year)  16 JULY 2002</p>	<p>Priority date (day/month/year)  16 JULY 2001</p>
<p>International Patent Classification (IPC) or both national classification and IPC Please See Supplemental Sheet.</p>		
<p>Applicant AUGUST TECHNOLOGY CORPORATION</p>		

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

**When?** See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).~~

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6.

**If no reply is filed**, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 16 NOVEMBER 2003.

<p>Facsimile No.  (703) 305-3230</p>	<p>Authorized officer AND Telephone No.  HOA Q. PHAM (703) 308-4808</p>
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**I. Basis of the opinion**

1. With regard to the **elements** of the international application:\*

☒ the international application as originally filed

☒ the description:

pages 1-19 , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the claims:

pages 20-23 , as originally filed  
pages NONE , as amended (together with any statement) under Article 19  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the drawing:

pages 1 , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

☒ the sequence listing part of the description:

pages NONE , as originally filed  
pages NONE , filed with the demand  
pages NONE , filed with the letter of \_\_\_\_\_

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

☒ the description, pages none

☒ the claims, Nos. none

☒ the drawings, sheets/fig none

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".

**II. Priority**

1. ☐ This opinion has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☐ copy of the earlier application whose priority has been claimed.
- ☐ translation of the earlier application whose priority has been claimed.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid.

Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been and will not be examined in respect of:

☐ the entire international application.

☐ claims Nos. \_

because:

☐ the said international application, or the said claim Nos. \_ relate to the following subject matter which does not require international preliminary examination (*specify*).

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_ are so unclear that no meaningful opinion could be formed (*specify*).

☐ the claims, or said claims Nos. \_ are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. \_.

2. A written opinion cannot be drawn due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

**WRITTEN OPINION**  
Form PCT/IPEA/408 (Box IV) (July 1998)  
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International application No.

PCT/US02/22546

**IV. Lack of unity of invention**

1. In response to the invitation (Form PCT/IPEA/405) to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. This Authority found that the requirement of unity of invention is not complied with for the following reasons and chose, according to Rule 68.1 not to invite the applicant to restrict or pay additional fees:

3. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this opinion:

- ☐ all parts.
- ☐ the parts relating to claims Nos. .

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. statement**

Novelty (N)	Claims <u>5, 7-13, 16-20</u>	YES
	Claims <u>1-4, 6, 14, 15</u>	NO
Inventive Step (IS)	Claims <u>5, 7-13, 16-20</u>	YES
	Claims <u>1-4, 6, 14, 15</u>	NO
Industrial Applicability (IA)	Claims <u>1-20</u>	YES
	Claims <u>NONE</u>	NO

**2. citations and explanations**

Claims 1-5, 6, 14, and 15 lack an inventive step under PCT Article 33(3) as being obvious over Corle et al (5,067,805).

Regarding claims 1-4, 6, 14, and 15; Corle et al discloses a method and apparatus for imaging dense line width features using an optical microscope in which a beam splitter (57, 59) is used. Corle et al do not explicitly teach that the beam splitter is a pellicle beams splitter. however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the beam splitter of Corle et al by a pellicle beam splitter because they are equivalent in function. a substitute for one of another is recognized as being within the level of ordinary skill in the art.

Regarding claim 5, Corle et al teach that rotary disk (51) is two dimensional array and a further aperture array (75) includes one pinhole having an associated individual microlens (77). see figure 3.

Claims 7-13, and 16-20 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest that "the camera reimager is telecentric on the side facing the intermediate focus" (claim 7), "the light source includes an illuminator with a filament designed to provide a quasi uniformly luminous area that is internally imaged into a numerical aperture stop and reimaged into the telecentric pupil of the object imager" (claims 9 and 11) and "measuring the elevation of the surface using gaussian curve based upon the light intensities measured at the first and second elevations at each pixel" (claim 16).

----- NEW CITATIONS -----  
NONE

**WRITTEN OPINION**  
Form PCT/IPEA/408 (Box VI) (July 1998)  
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International application No.

PCT/US02/22546

**VI. Certain documents cited**

**1. Certain published documents (Rule 70.10)**

Application No.  
Patent No.  
\_\_\_\_\_

Publication Date  
(day/month/year)  
\_\_\_\_\_

Filing Date  
(day/month/year)  
\_\_\_\_\_

Priority date (valid claim)  
(day/month/year)  
\_\_\_\_\_

**2. Non-written disclosures (Rule 70.9)**

Kind of non-written disclosure  
\_\_\_\_\_

Date of non-written disclosure  
(day/month/year)  
\_\_\_\_\_

Date of written disclosure  
referring to non-written disclosure  
(day/month/year)  
\_\_\_\_\_

**WRITTEN OPINION**

Form PCT/IPEA/408 (Box VII) (July 1998)  
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International application No.

PCT/US02/22546

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:



**WRITTEN OPINION**

Form PCT/IPEA/408 (Box VIII) (July 1998)  
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International application No.

PCT/US02/22546

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**CLASSIFICATION:**

The International Patent Classification (IPC) and/or the National classification are as listed below:  
IPC(7): G01N 21/00; G02B 21/00; G06K 9/62; H04N 7/18 and US Cl.: 356/237.2, 237.4; 359/368; 348/126